

**What is claimed is:**

1. A route monitor control system comprising the steps of:

a plurality of OAM cell handlers (OCHs);

a plurality of virtual path handlers (VPHs);

5 a plurality of virtual channel handlers  
(VCHs);

trunks; and

a control unit which:

issues an OAM (operation and maintenance)

10 cell send instruction to a specific one of said plurality of OAM cell handlers,

controls said specific OAM cell handler to carry out a loop back control to at least one of said virtual path handler, said virtual channel handler,

15 and said trunk, which are associated with said specific OAM cell handler, as an object unit in response to said OAM cell send instruction, and when said specific OAM cell handler sends out an OAM cell from said specific OAM cell handler to said object

20 unit in response to said OAM cell send instruction, determines a fault position based on returning or non-returning of the OAM cell from said object unit to said specific OAM cell handler.

2. The route monitor control system according to claim 1, wherein said control unit carries out a

switching operation of a route from said virtual path  
handler to said trunk for fault avoidance based on the  
5 determining fault position.

3. The route monitor control system according to  
claim 1, wherein said plurality of OAM cell handlers,  
said plurality of virtual path handlers, said  
plurality of virtual channel handlers, said trunks,  
5 and said control unit are contained in an ATM  
(asynchronous transfer mode) switching apparatus.

4. The route monitor control system according to  
claim 1, wherein said control unit periodically issues  
said OAM cell send instruction to said specific OAM  
cell handler.

5. The route monitor control system according to  
claim 1, wherein said control unit controls said  
specific OAM cell handler to carry out said loop back  
control to all of said virtual path handler (VPH),  
5 said virtual channel handler (VCH), and said trunk,  
which are associated with said specific OAM cell  
handler, as said object units in response to said OAM  
cell send instruction, and when said specific OAM cell  
handler sends out said OAM cells to said object units  
10 in response to said OAM cell send instruction,  
determines the fault position based on returning or

non-returning of each of the OAM cells from said object unit to said specific OAM cell handler.

6. The route monitor control system according to claim 1, wherein said control unit carries out the issuing operation, the loop back control and the determining operation while changing said specific OAM  
5 cell handler among said plurality of OAM cell handlers.

7. A route monitor control method comprising the steps of:

(a) issuing an OAM (operation and maintenance) cell send instruction to a specific one  
5 of a plurality of OAM cell handlers (OCHs);

(b) carrying out a loop back control to at least one of a virtual path handler (VPH), a virtual channel handler (VCH), and a trunk, which are associated with said specific OAM cell handler, as an  
10 object unit in response to said OAM cell send instruction;

(c) sending out an OAM cell from said specific OAM cell handler to said object unit in response to said OAM cell send instruction; and

15 (d) determining a fault position based on returning or non-returning of the OAM cell from said object unit to said specific OAM cell handler.

8. The route monitor control method according to  
claim 7, further comprising the step of:

carrying out a route switching operation for  
fault avoidance based on the determining fault  
5 position.

9. The route monitor control method according to  
claim 7, wherein said object unit is contained in an  
ATM (asynchronous transfer mode) switching apparatus.

10. The route monitor control method according to  
claim 7, wherein said virtual path handler (VPH), said  
virtual channel handler (VCH), and said trunk, and  
said specific OAM cell handler are contained in an ATM  
5 (asynchronous transfer mode) switching apparatus.

11. The route monitor control method according to  
claim 7, wherein said (a) issuing step comprises the  
step of:

periodically issuing said OAM cell send  
5 instruction to said specific OAM cell handler.

12. The route monitor control method according to  
claim 7, wherein said (b) carrying out step comprises  
the step of:

carrying out said loop back control to all of  
5 said virtual path handler (VPH), said virtual channel

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handler (VCH), and said trunk as said object units in response to said OAM cell send instruction, and

      said (c) sending out step comprises the step of:

10          sending out said OAM cells from said specific OAM cell handler to said object units in response to said OAM cell send instruction.